<u>IN THE CLAIMS</u>

1. (Currently amended) A processor-implemented method for providing a desired level of performance for a wireless network, the method comprising the steps of:

applying an optimization process to a set of information characterizing the network, the optimization process comprising a multi-stage process including at least a frequency assignment stage and a post-frequency-assignment optimization stage, the post-frequency-assignment optimization stage being applied after assignment of frequencies to one or more communication channels of the wireless network in the frequency assignment stage, the post-frequency-assignment optimization stage being configured to utilize derivative-based optimization of a specified objective function in order to determine a particular network configuration for specified values of network capacity and network coverage, and wherein at least a subset of the stages of the multi-stage process are iterated; and

utilizing an output of the optimization process to determine at least one operating parameter of the wireless network.

2. (Original) The method of claim 1 wherein the optimization process further comprises a three-stage optimization process having a pre-frequency-assignment optimization stage, the frequency assignment stage and the post-frequency-assignment optimization stage.

3. (Original) The method of claim 1 wherein at least a subset of the three stages of the three-stage optimization process are repeated in an iterative manner.

4. (Original) The method of claim 1 wherein the frequency assignment stage comprises a frequency planning stage.

5. (Original) The method of claim 1 wherein the wireless network implements a frequency reuse factor greater than one.

6. (Original) The method of claim 1 wherein the wireless network comprises at least one of a TDMA wireless network, an FDMA wireless network, a CDMA wireless network, an OFDM wireless network, and a TDD wireless network.

7. (Canceled)

8. (Original) The method of claim 1 wherein the operating parameter of the wireless network comprises at least one of a base station transmit power and an antenna orientation.

9. (Canceled)

10. (Original) The method of claim 1 wherein the optimization process generates a graphical display in the form of a tradeoff curve of capacity versus coverage.

11. (Original) The method of claim 1 wherein the optimization process generates a graphical display in the form of a tradeoff curve of percent carrier-to-interference ratio above threshold versus coverage.

12. (Currently amended) An apparatus for use in providing a desired level of performance for a wireless network, the apparatus comprising:

a processor-based system operative to apply an optimization process to a set of information characterizing the network, the optimization process comprising a multi-stage process including at least a frequency assignment stage and a post-frequency-assignment optimization stage, the post-frequency-assignment optimization stage being applied after assignment of frequencies to one or more communication channels of the wireless network in the frequency assignment stage, the post-frequency-assignment optimization stage being configured to utilize derivative-based optimization of a specified objective function in order to determine a particular network configuration for specified values of network capacity and network coverage, and wherein at least a subset of the stages of the multi-stage process are iterated;

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wherein an output of the optimization process is utilized to determine at least one operating parameter of the wireless network.

13. (Currently amended) An apparatus for use in providing a desired level of performance for a wireless network, the apparatus comprising:

means for applying an optimization process to a set of information characterizing the network, the optimization process comprising a multi-stage process including at least a frequency assignment stage and a post-frequency-assignment optimization stage, the post-frequency-assignment optimization stage being applied after assignment of frequencies to one or more communication channels of the wireless network in the frequency assignment stage, the post-frequency-assignment optimization stage being configured to utilize derivative-based optimization of a specified objective function in order to determine a particular network configuration for specified values of network capacity and network coverage, and wherein at least a subset of the stages of the multi-stage process are iterated; and

means for utilizing an output of the optimization process to determine at least one operating parameter of the wireless network.

14. (Currently amended) An article of manufacture comprising a machine-readable medium for storing one or more software programs for use in providing a desired level of performance for a wireless network, wherein the one or more programs when executed by a processor-based system perform the step of:

applying an optimization process to a set of information characterizing the network, the optimization process comprising a multi-stage process including at least a frequency assignment stage and a post-frequency-assignment optimization stage, the post-frequency-assignment optimization stage being applied after assignment of frequencies to one or more communication channels of the wireless network in the frequency assignment stage, the post-frequency-assignment optimization stage being configured to utilize derivative-based optimization of a specified objective function in order to determine a particular network configuration for specified values of network

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capacity and network coverage, and wherein at least a subset of the stages of the multi-stage process are iterated;

wherein an output of the optimization process is utilized to determine at least one operating parameter of the wireless network.